

Listing of Claims:

1. (Currently amended) An electronic camera, comprising:
 - an electronic image capture device adapted for capturing an image scene;
 - a photocell adapted for sensing light energy received from said image scene;
 - a scanning aperture shutter unit located to control light energy received by said electronic image capture device and the photocell; and
 - an exposure control system responsive to said photocell and operatively connected to said scanning aperture shutter,wherein said exposure control system is adapted to control said scanning aperture shutter and a flash unit in response to sensed light energy at said photocell ~~to control a variable amount of fill flash energy received by said electronic image capture device in relation to ambient light energy received by said electronic image capture device during image capture~~ so that said electronic image capture device receives a predetermined ratio of variable fill flash energy to ambient light energy during image capture.
2. (Original) The camera of claim 1, wherein said exposure control system is adapted to illuminate said flash unit once a predetermined amount of ambient light energy is sensed by said photocell.
3. (Original) The camera of claim 2, wherein said exposure control system is adapted to extinguish said flash unit once a predetermined amount of infrared spectrum energy is sensed by said photocell during flash unit illumination.
4. (Original) The camera of claim 1, wherein said photocell includes a visible spectrum photocell and an infrared spectrum photocell, and further wherein, said exposure control system is adapted to use said visible spectrum photocell to sense ambient light energy received from said image scene prior to illumination by said flash unit and to use said infrared photocell for sensing infrared spectrum energy received from said image scene during illumination by said flash unit.
5. (Original) The camera of claim 4, wherein said scanning aperture shutter includes separate apertures for said image capture device, said visible spectrum photocell and said

infrared spectrum photocell.

6. (Original) The camera of claim 1, wherein said exposure control system is adapted to generate control signals for a detachable flash unit.
7. (Original) The camera of claim 1, wherein said flash unit is constructed integrally with said camera.
8. (Currently amended) An electronic camera, comprising:
 - an electronic image capture device adapted for capturing an image scene;
 - a scanning aperture shutter located to control light energy received by said image capture device;
 - a flash unit oriented to illuminate said image scene;
 - a photocell unit adapted for sensing visible spectrum energy and infrared spectrum energy received from said image scene, wherein the scanning aperture shutter is able to control said sensed light energy; and
 - an exposure control system responsive to said photocell unit and operatively connected to said scanning aperture shutter and said flash unit,wherein said exposure control system is adapted to control an amount of fill flash energy received from said image scene in relation to visible ambient light energy received from said image scene during image capture by ~~illuminating said flash unit a variable amount once a predetermined amount of ambient visible spectrum energy is sensed by said photocell unit and by extinguishing said flash unit once a predetermined amount of infrared energy is sensed by said photocell unit~~ varying an aperture size of said scanning aperture shutter and controlling said flash unit so that said electronic image capture device receives a predetermined ratio of variable fill flash energy to ambient light energy during image capture.
9. (Original) The camera of claim 8, wherein said visible spectrum and infrared spectrum photocells are separate devices.
10. (Original) The camera of claim 9, wherein said shutter includes separate, proportionately

operable, variable apertures for said image capture device and said photocell unit.

11. (Previously presented) The camera of claim 8, wherein said flash unit is a quenchable strobe light.

12. (Currently amended) A method for electronic image capture using a fill flash function, comprising:

using a scanning aperture shutter to control light energy received by an electronic image capture device;

sensing visible ambient light energy and infrared energy received from an image scene and controlled by said scanning aperture shutter; and

controlling said scanning aperture shutter and a flash unit during image capture in response to said sensing ~~to cause a predetermined ratio of fill flash light energy to ambient light energy to be received by said electronic image capture device including illuminating said flash unit a variable amount once a predetermined amount of ambient light energy is sensed during image capture~~ in order to attain a predetermined ratio of variable fill flash energy to ambient light energy that is received by said electronic image capture device during image capture.

13. (Previously Presented) The method of claim 12, wherein said sensing uses an infrared spectrum photocell for sensing infrared energy received from said image scene during illumination by said flash unit.

14. (Previously Presented) The method of claim 13, wherein said sensing uses a visible light spectrum photocell for sensing ambient light energy received from said image scene before illumination by said flash unit.

15. (Original) The method of claim 12, wherein said scanning aperture shutter includes separate, proportionately operable, variable apertures for image capture and said step of sensing.

16. (Previously Presented) The method of claim 12, wherein said controlling includes extinguishing said flash unit once a predetermined amount of infrared spectrum energy is sensed during flash unit illumination.

17. (Currently amended) An electronic camera, comprising:

means for capturing an image scene;

means for controlling light;

wherein said means for controlling light is located to control light energy received by said means for capturing from said image scene;

means for sensing light energy received from said image scene, wherein said means for controlling light is able to control said sensed light energy; and

means for controlling an exposure responsive to said means for sensing light and operatively connected to said means for controlling light including a means for scanning,

wherein said means for controlling an exposure is adapted to control said means for controlling light and a means for discharging a flash of light in response to sensed light energy at said means for controlling light ~~to control a variable amount of fill flash energy received by said means for capturing in relation to ambient light energy received by said means for capturing during image capture~~ so that said electronic image capture device receives a predetermined ratio of variable fill flash energy to ambient light energy during image capture.

18. (Previously Presented) The camera of claim 17, wherein said means for controlling an exposure is adapted to illuminate said means for discharging a flash of light once a predetermined amount of ambient light energy is sensed by said light control means.

19. (Previously Presented) The camera of claim 18, wherein said means for controlling an exposure is adapted to extinguish said means for discharging a flash of light once a predetermined amount of infrared spectrum energy is sensed by said light sensing means during flash unit illumination.

20. (Previously Presented) The camera of claim 17, wherein said means for sensing light includes means for sensing visible spectrum and means for sensing infrared spectrum light, and further wherein, said means for controlling an exposure is adapted to use said means for sensing visible spectrum to sense ambient light energy received from said image scene prior to illumination by said means for discharging a flash of light and to use said means for sensing infrared light for sensing infrared spectrum energy received from said image scene during illumination by said flash unit.

21. (Previously Presented) The camera of claim 20, wherein said means for controlling light includes separate apertures for said means for capturing an image scene, said means for sensing visible spectrum light and said means for sensing infrared spectrum light.

22. (Previously Presented) The camera of claim 17, wherein said means for controlling an exposure is adapted to generate control signals for a detachable means for discharging a flash of light.

23. (Previously Presented) The camera of claim 17, wherein said means for discharging a flash of light is constructed integrally with said camera.

24. (Currently amended) An electronic camera, comprising:

- a means for capturing an image scene;
- a means for controlling light energy received by said means for capturing an image scene;
- a means for discharging a flash of light oriented to illuminate said image scene;
- a means for sensing visible spectrum energy and infrared spectrum energy received from said image scene, wherein said means for controlling light is able to control said sensed visible spectrum energy and said infrared spectrum energy;
- a means for sensing light energy received from said image scene; and
- a means for controlling an exposure responsive to said means for sensing light and operatively connected to said means for controlling light and said means for discharging a flash of light,

wherein said means for controlling an exposure is adapted to control an amount of fill flash energy received from said image scene in relation to visible ambient light energy received from said image scene during image capture by ~~illuminating said means for discharging a flash of light a variable amount once a predetermined amount of ambient visible spectrum energy is sensed by said means for sensing light and by extinguishing said means for discharging a flash of light once a predetermined amount of infrared energy is sensed by said means for sensing light~~ varying an aperture size of said scanning aperture shutter and controlling said flash unit so that said electronic image capture device receives a predetermined ratio of variable fill flash energy to ambient light energy during image capture.

25. (Previously Presented) The camera of claim 24, wherein said means for sensing visible spectrum and infrared spectrum are separate devices.

26. (Previously Presented) The camera of claim 25, wherein said means for controlling light includes separate, proportionately operable, variable apertures for said image capturing means and said light sensing means.

27. (Previously Presented) The camera of claim 24, wherein said means for discharging a flash of light is a quenchable strobe light.

28. (Currently amended) A method for electronic image capture using a fill flash function, comprising:

using a means for controlling light to control light energy received by a means for capturing an electronic image;

sensing visible ambient light energy and infrared energy received from an image scene and controlled by said means for controlling light; and

controlling said means for controlling light and a means for discharging a flash of light during image capture in response to said sensing ~~to cause a predetermined ratio of fill flash light energy to ambient light energy to be received by said means for capturing an electronic image including illuminating said means for discharging a flash of light a variable amount once a predetermined amount of ambient light energy is sensed during image capture~~ in order to attain a

predetermined ratio of variable fill flash energy to ambient light energy that is received by said electronic image capture device during image capture.

29. (Currently amended) An electronic image capture device adapted for capturing an image scene, comprising:

a means for controlling light energy received by said electronic image capture device from said image scene;

a means for discharging a flash of light oriented to illuminate said image scene;

a means for sensing light energy received from said image scene, wherein said light control means is able to control said sensed light energy; and

a means for controlling an exposure responsive to said means for sensing light and operatively connected to said light control means,

wherein said means for controlling an exposure control system is adapted to control said means for controlling light and a flash unit in response to sensed light energy at said means for sensing light ~~to control a variable amount of fill flash energy received by said electronic image capture device in relation to ambient light energy received by said electronic image capture device during image capture~~ so that said electronic image capture device receives a predetermined ratio of variable fill flash energy to ambient light energy during image capture.

30. (Currently amended) An electronic image capture device adapted for capturing an image scene, comprising:

a light control unit located to control light energy received by said image capture device;

a flash unit oriented to illuminate said image scene;

a light sensor unit adapted for sensing visible spectrum energy and infrared spectrum energy received from said image scene, wherein said light control unit is able to control said sensed visible spectrum energy and said infrared spectrum energy; and

an exposure control system responsive to said light sensor unit and operatively connected to said light control unit and said flash unit,

wherein said exposure control system is adapted to control an amount of fill flash energy received from said image scene in relation to visible ambient light energy received from said image scene during image capture by ~~illuminating said flash unit a variable amount once a~~

DOCKET NO.: **BA-0341
Application No.: 10/662,763
Office Action Dated: June 24, 2009

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~~predetermined amount of ambient visible spectrum energy is sensed by said light sensor unit and by extinguishing said flash unit once a predetermined amount of infrared energy is sensed by said light sensor unit~~ varying an aperture size of said scanning aperture shutter and controlling said flash unit so that said electronic image capture device receives a predetermined ratio of variable fill flash energy to ambient light energy during image capture.